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CENTRAL FAX CENTER****NOV 19 2007****Remarks**

Applicant's representative is very grateful for the Examiner's suggested claim amendments during a teleconference on November 15. The claims have been amended according to suggestions made by the Examiner. Support for the amended claim can be found in the specification as cited below.

Specific Support for Claims under 35 U.S.C. 112:**Support for claim 21 – “introducing oxygen into the sulfuric acid solution”**

Oxygen containing gas is introduced in a sulfuric acid flow, preferably at a pressure above the pressure of sulfuric acid solution. Next, the sulfuric acid and oxygen are introduced to each reactor column. [Paragraph 0018, page 2]

Support for claim 21 – “contacting said oxygen and said sulfuric acid solution with the bulk nickel metal in the at least one enclosed reactor to produce nickel sulfate solution, wherein the sulfuric acid solution is maintained within a pH range of about 0.1 to 6.0.”

The sulfuric acid solution and oxygen contacts the nickel metal to produce nickel sulfate solution and water with the chemical reaction as follows [Paragraph 0018, page 2]

The concentration of sulfuric acid is about 1% to about 30% ... However, the concentration of the sulfuric acid may be higher or lower than the preferred range, so long as the desired reaction occurs and the appropriate pH is maintained. A pH of about 0.1 to 6.0 is preferable... Water may be added to adjust the pH. [Paragraph 35, page 3]

Support for claim 47, “the pH range is 2.5 to 4.0”

Note that claim 47 has been amended from “the pH range is 2.5 or less” to “the pH range is 2.5 to 4.0.

A pH of 2.5 to 4.0 is most preferable [Paragraph 35, page 3]

The pH of the sulfuric acid container/collection receptacle was maintained at pH of 2.5 – 4.0 [Paragraph 43, page 5]

Support for claim 51, "the pH range is 0.1 to 4.0"

Note that claim 47 has been amended from "the oxygen-containing sulfuric acid solution is controlled to a pH of less than 4.0" to "the pH range is 1.0 to 4.0.

A pH of about 0.1 to 6.0 is preferable. A pH of 2.5 to 4.0 is most preferable
[Paragraph 35, page 3]

Support for claim 52, "wherein at least 1.8 kg of bulk nickel is converted to nickel sulfate"

Claim 52 has been amended to "said nickel sulfate solution contains about 1.8 kg of nickel." as supported below:

The weight of nickel pellets set into the reactor column was about 25 pounds ... The reaction continued for approximately 15 hours until the concentration of nickel sulfate exceeded the weight % of nickel. The nickel sulfate was separated from the solution and about 1.8 kg of nickel was retrieved from the solution.
[Paragraph 43, page 5]

Support for claim 53, "temperature of 20 to 95 degrees Celsius"

The temperature of the reactor column(s) is preferably 20 °C to 100 °C, a temperature of 90 °C to 95 °C is most preferable. [Paragraph 38]

Support for claim 54, "wherein at least 1.8 kg of bulk nickel is converted to nickel sulfate"

Claim 54 has been amended to "said nickel sulfate solution contains about 1.8 kg of nickel." as supported below:

The weight of nickel pellets set into the reactor column was about 25 pounds ... The reaction continued for approximately 15 hours until the concentration of nickel sulfate exceeded the weight % of nickel. The nickel sulfate was separated from the solution and about 1.8 kg of nickel was retrieved from the solution.
[Paragraph 43, page 5]

Support for claim 56, "the first pressure differs from the second pressure by an amount between 1 psi and 140 psi"

The present invention disclosed a process for the production of nickel hydroxide comprising providing at least one enclosed reactor, preferably a reactor column, containing nickel then introducing sulfuric acid at a first pressure (about 10 psi to about 149 psi) into the enclosed reactor column(s) to dissolve the nickel to produce a solution. Oxygen containing gas is introduced into the solution at a second pressure (about 11 to about 150 psi) above the first pressure to produce nickel sulfate solution [Paragraph 20, page 2]

Maximum (150psi) - Minimum (10 psi) = 140 psi
Minimum difference = 1 psi [e.g., 150-149 psi]

Support for claim 57, "the first pressure is in a range of about 10 psi to about 149 psi and the second pressure is in a range of about 11 psi to about 150 psi"

The present invention disclosed a process for the production of nickel hydroxide comprising providing at least one enclosed reactor, preferably a reactor column, containing nickel then introducing sulfuric acid at a first pressure (about 10 psi to about 149 psi) into the enclosed reactor column(s) to dissolve the nickel to produce a solution. Oxygen containing gas is introduced into the solution at a second pressure (about 11 to about 150 psi) above the first pressure to produce nickel sulfate solution [Paragraph 20, page 2]

Support for claim 58, "the bulk nickel metal has an average size greater than 0.1 mm"

Preferably, bulk nickel, i.e., nickel having an average size greater than 0.1 mm is used. [Paragraph 40, page 4]

Support for 59, "the bulk nickel metal has an average size greater than 0.254 cm in diameter"

The nickel pellets set into the reactor column were 99.99 % nickel and had an average size of 0.254 to 3.81 cm (0.1 to 1.5 inches) in diameter [Paragraph 43, page 5]

Support for claim 60, "the bulk nickel metal has an average size of 0.254 cm to 3.81 cm in diameter"

Note that claim 60 has been amended from "0.245 cm" to "0.254 cm" to correct for a typographical error.

The nickel pellets set into the reactor column were 99.99 % nickel and had an average size of 0.254 to 3.81 cm (0.1 to 1.5 inches) in diameter [Paragraph 43, page 5]

Support for claim 61, "the surface area of the bulk nickel is .20 square centimeters or greater."

The nickel pellets set into the reactor column were 99.99 % nickel and had an average size of 0.254 to 3.81 cm (0.1 to 1.5 inches) in diameter [Paragraph 43, page 5]

*Nickel pellets having an average size of 0.254 cm have a surface area of .20 square centimeters – $4 * \pi * (r^2) = 4 * \pi * (0.254)^2 = 0.20 \text{ cm}^2$*

Support for claim 65, "introducing oxygen into the sulfuric acid solution, said oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution; and contacting said oxygen and said sulfuric acid solution with the bulk nickel metal in the at least one enclosed reactor wherein the enclosed reactor is maintained at a temperature of 20 degrees Celsius to 95 degrees Celsius."

The claim has been amended as suggested by the Examiner. Specific support can be found below:

The temperature of the reactor column(s) is preferably 20 °C to 100 °C, a temperature of 90 °C to 95 °C is most preferable. [Paragraph 38, page 4]

Oxygen containing gas is introduced in a sulfuric acid flow, preferably at a pressure above the pressure of sulfuric acid solution. Next, the sulfuric acid and oxygen are introduced to each reactor column. The sulfuric acid solution and oxygen contacts the nickel metal to produce nickel sulfate solution and water with the chemical reaction as follows [Paragraph 0018, page 2]

Support for claim 66, "at least 1.8 kg of bulk nickel is converted to nickel sulfate 1.8 kg of nickel"

The claim has been amended to "said nickel sulfate solution includes about 1.8 kg of nickel" as supported below:

The weight of nickel pellets set into the reactor column was about 25 pounds ... The reaction continued for approximately 15 hours until the concentration of nickel sulfate exceeded the weight % of nickel. The nickel sulfate was separated from the solution and about 1.8 kg of nickel was retrieved from the solution. [Paragraph 43, page 5]

Support for claim 67, "the bulk nickel metal has an average size greater than 0.1 mm in diameter."

Preferably, bulk nickel, i.e., nickel having an average size greater than 0.1 mm is used. [Paragraph 40, page 4]

Support for claim 68, "the bulk nickel metal has an average size greater than 0.254 mm in diameter.

The nickel pellets set into the reactor column were 99.99 % nickel and had an average size of 0.254 to 3.81 cm (0.1 to 1.5 inches) in diameter [Paragraph 43, page 5]

Support for. 69, "introducing oxygen into the sulfuric acid solution, and contacting the oxygen and sulfuric acid solution with the bulk nickel metal in the enclosed reactor, wherein the sulfuric acid solution is maintained within a pH range of about 0.1 to 4.0 and the enclosed reactor is maintained at a temperature of 20 degrees Celsius to 100 degrees Celsius.

Note that claim 69 has been amended based on suggestions provided by the Examiner.

Oxygen containing gas is introduced in a sulfuric acid flow, preferably at a pressure above the pressure of sulfuric acid solution. Next, the sulfuric acid and oxygen are introduced to each reactor column. The sulfuric acid solution and oxygen contacts the nickel metal to produce nickel sulfate solution and water with the chemical reaction as follows [Paragraph 0018, page 2]

A pH of 0.1 to 4.0 is most preferable. [Paragraph 35, page 3]

The temperature range has been amended from below 95 degrees Celsius to between 20 and 100 degrees Celsius. Support can be found below:

Water may be added to adjust the pH. The temperature of the reactor column is preferably 20 degrees Celsius to 100 Degrees Celsius [Paragraph 35, page 3]

Definiteness of Claims under 36 U.S.C 112

Claims 56, 57 have been amended. The rejection is moot in light of the current amendment.

Claim 63 has been amended. The rejection is moot in light of the current amendment.

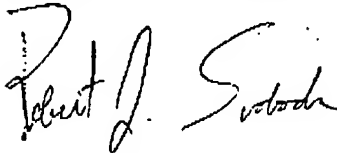
Claim 66-68 has been amended. The rejection is moot in light of the current amendment.

Claim 69 has been amended. The rejection is moot in light of the current amendment.

Applicants representative respectfully submits that all rejections under 35 U.S.C. 112 have been overcome. Therefore, removal of the rejections under 35 U.S.C. 112 is respectfully requested.

Applicants respectfully request withdrawal of all outstanding rejections and respectfully submit that the application stands in condition for allowance. If the Examiner has any questions or suggestions regarding this amendment, the Examiner is respectfully asked to contact Applicants' representative at the telephone number or email address listed below.

Respectfully submitted,



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